

Mimulus Memo



Iris hartwegii: Lovely Native of California's Sierra Nevada

by Nancy Nies

SEPTEMBER 2015

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EVENTS

SEPTEMBER

1 – Executive Committee Mtg., 6pm
17 – Meeting, 6 pm
Program, 7 pm

OCTOBER

15 – Meeting, 6 pm
Program, 7 pm

NOVEMBER

19 – Meeting, 6 pm
Program, 7 pm

A HIGHLIGHT OF THE KERN CNPS MAY 30 FIELD TRIP TO OLD State Road in the Greenhorn range was the sighting of a colony of *Iris hartwegii*, known by the common names of Hartweg's iris, Sierra iris and rainbow iris. The delicate flowers were a very light shade of lavender, almost white, with yellow throats and dark veining. I was enthralled, and wanted to find out more about this beautiful California native.

I imagine I was destined to be drawn to this particular iris, since I have a special fondness both for the Sierra, having visited it most of the summers of my life, and for irises, my grandfather **Eric Nies** having been an iris hybridizer. My grandfather worked mainly with spurias, but also with other irises, including Pacific Coast natives.

Fifteen years ago, the **American Iris Society** asked me to compile a "chronicle" on my grandfather and his hybridizing work. My research led me to join several iris organizations, including the **Society for Pacific Coast Native Iris (SPCNI)**.

The SPCNI website (www.pacificcoastiris.org) lists twelve iris species native to the Pacific Coast, half of which are endemic to California. Each species is accompanied by beautiful photos and detailed information on its features and distribution. SPCNI organizes "treks" to see native species growing in the wild—an *Iris munzii* trek to Sequoia National Park, for example.

But let's get back to the lovely *Iris hartwegii*. It is native to the length of California's Sierra Nevada, from Plumas County in the north to Kern County in the south, at elevations between 2000 and 7000 feet, says SPCNI. **Ernest**



Photo: Nancy Nies

Iris hartwegii (Continued)

Twisselmann, in his *A Flora of Kern County*, writes of occasional colonies growing “on moist shaded slopes north of the Greenhorn Pass, the southern limits for the species”—which is precisely where we in the Kern CNPS group found it. According to SPCNI, the original specimens were collected in 1847 at Bear Creek (Nevada County, California) by German botanist-explorer **Karl Theodor Hartweg**, after whom **John Gilbert Baker** named the iris.

SPCNI describes the Sierra iris as “usually light cream to bright yellow, with a darker yellow center spot; sometimes maroon or lavender, often with darker veins, especially in the southern Sierra . . .” The colony of around ten plants spotted on the Kern CNPS field trip was indeed a light lavender with dark veining. The key features of *I. hartwegii*, says SPCNI, are: a short, stocky floral tube (less than 3/4 inch); separate, spreading spathes which leave the ovary exposed; and “clumps” actually made up of individual plants. *I. hartwegii* has at least three subspecies. **Erin Riggs**, in her 2003 study of the *I. hartwegii* subspecies groups, calls the iris “as sweet as a small ray of sun.” (For her study, see http://www.pacificcoastiris.org/spcni_photojournals/pj_hartwegii_complex_riggs.html).

I. hartwegii is among the half-dozen or so Pacific Coast native irises (PCNs) available through **Las Pilitas Nursery** in Santa Maria, which provides the following information on the iris: “It can be found growing in heavy, moist shade, in thick duff under firs and pines, and in sunny, moist meadow areas. Sierra iris goes deciduous during the winter . . . [and] grows best in higher elevation gardens, where it can go dormant in the colder winters and grow through cooler summers.”

Liz Parsons, a CNPS Fellow, offers tips on growing Pacific Coast native iris species and hybrids in your garden. (See http://www.cnps.org/cnps/grownative/pdf/pacific_coast_iris-parsons.pdf). In the early 2000s I planted some Pacific Coast native iris hybrids — my grandfather’s and others — in our shady backyard. Though I have lost some of them, several hardy ones have continued to bloom every spring — even in Bakersfield’s less-than-optimum climate for growing PCNs, and even in this year of drought.

For me, seeing my grandfather’s Pacific Coast native iris hybrids blooming in my garden is an annual delight. However, seeing a PCN like *Iris hartwegii* blooming in the wild is an

unforgettable thrill. I can identify with Erin Riggs, who writes that the Sierra iris has found a place in her heart. If you should happen to see it blooming, in a garden or in the wild, it might just find a place in yours! ☘

Thank you to:

Nancy Nies for her proof-reading skill, eagle-eye, and sound judgment in faithfully reviewing every issue of the *Mimulus Memo*.

Lucy Clark, who deserves a shout-out for organizing the Horse Meadow camping, star-gazing, and botanizing weekend on the Kern Plateau. The camp-out is becoming a must-attend annual event for Kern CNPS. Lucy even provided a bouquet of flowering plants in our withering drought. ☘



Photos: Dinah Campbell

Lucy in a meadow full of Sierra shooting stars (*Dodecatheon jeffreyi*) on the Horse Meadow camp-out trip.

President's Message: Status on Trees and Shrubs of Kern County, California.

by Richard Spjut

AFTER JOINING CNPS IN 2009, I VOLUNTEERED to teach a short course on the trees and shrubs of Kern County during the 2011 fall session at the Levan Institute, the subject chosen in anticipation of not seeing much in the way of annual flowers during the month of October. At the time I felt it would not be difficult to put together an identification guide, which seemed essential, since the **Ernest Twisselmann** 1967 flora with **Maynard Moe's** 1995 key was out-of-print. Although I limited my field trips to woody plants along Highways 58, 14,

...I soon realized that preparing an identification guide was not going to be an easy task despite all the previously published floras on Kern County plants...

published floras on Kern County plants. So what was the problem? I will present two examples:

1. Kern *Ephedra* plants do not meet the technical descriptions given for the species in floras, and
2. It is difficult to decide the correct scientific name for a common species of buckbrush (*Ceanothus*).

Ephedra —

Twisselmann recognized *Ephedra* in Kern County as having three species: *E. californica* (whorled leaves, green stems, 1-seeded cones), *E. nevadensis* (opposite leaves, gray stems, 2-seeded cones), and *E. viridis* (opposite leaves, green stems, 2-seeded cones). Here I will focus on green ephedra (*E. viridis*). **Stephanie M. Ickert-Bond** in the 2nd edition of the **Jepson Manual** described the seed cones as developing on stalks not more than 4 mm long — shorter than that given for the seed, 5-8 mm. An image shown here from a plant near Frazier Park (Fig.1) has seed stalks twice that length. Another image of a plant near the south end of Lake Isabella (Fig. 2) has green leaves, but **Dennis Stevenson** - in **Flora of North America (1993)** - described the leaves of green *Ephedra* as "non-photosynthetic." Moreover, no U.S. species are reported to have green leaves.

In a CNPS chapter field trip to Short Canyon this year, we briefly stopped below Walker Pass. There I recall

Paul Gipe looking for leaves on an *Ephedra* with cones, but none were evident. I had encountered the same result in previous spring trips at this location, while I recognized the plants as green ephedra by their parallel green-colored stems, in contrast to Nevada ephedra which has wide spreading, intertwining, gray stems. However, this past July I visited The Nature Conservancy

easements north of Caliente with **Zachary Principe**, the Stewardship Ecologist, who showed me a green ephedra that had new leaves, no doubt the result of a recent rain. Soon after, I drove to Walker Pass and found the *Ephedra* there with new leaves. Thus, green ephedra plants at Lake Isabella and Frazier Park, for example, develop leaves and cones in the spring after winter rains, whereas at Walker Pass and near Caliente cones only appear in the spring and leaves after a summer rain. The type specimen from the Coso Mts. in Inyo County (US44885, image no. 12125) lacks leaves and appears to have recently shed pollen when collected on June 12, 1891. Therefore, the Lake Isabella and Frazier Park ephedras represent, in my opinion, distinct species or varieties.

Ceanothus —

Our most common buckbrush is known by the scientific name, *C. cuneatus*, attributed either to **William Jackson Hooker**, who described the species in 1831 (**Flora boreali-americana, vol. 3**) in the coffeeberry genus (*Rhamnus*), or to **Thomas Nuttall**, who provided a description of *C. cuneatus* to **John Torrey** and **Asa Gray**, published in 1838 (**A Flora of North America**).



Photo by Richard Spjut.

Fig. 1 - *Ephedra viridis* showing two seeds subtended by two pairs of scales (= seed cone) at the end of a stalk-like branch ~10 mm long with four pairs of leaves. Kern Co.: slopes bordering Cuddy Valley, southeastern slopes of Tecuya Mountain, 26 June 2012.



Photo by Richard Spjut.

Fig. 2 - *Ephedra viridis* with green leaves. Rocky bench above Kern River near southern shore of Lake Isabella, 9 May 2014. Note short seed stalks and similar lower leaf parts compared to those in the preceding photo.

Message (Continued)

David Fross and Dieter Wilken — in their book, "**Ceanothus**", (Timber Press, 2006) — concluded that only Nuttall should be credited for the name, because Hooker's description was based on a plant collected by **David Douglas** that — in their judgment — had to be a different species from the one studied by Nuttall. But I

that we have in Kern County?

These include *Ceanothus vestitus*, described by **Edward Greene** in 1890 from a plant specimen collected along the "borders of the pine forest on the mountains near Tehachapi" and *C. pauciflorus* described by **Alphonse de Candolle** in 1825 based on a painting of the plant made around 1790, near Guanajuato, Mexico (Dylan O. Burge & Katherine Zhukovsky, **Systematic Botany**). Burge and Zhukovsky (2013), concluded - after a quantitative analysis of leaf character features of numerous specimens of *C. pauciflorus*, *C. perplexans*, and *C. vestitus* collected from Mexico to California- that our *C. vestitus* is the same as *C. pauciflorus*. The earliest name, therefore, is the one that must be adopted.

However, a type specimen (isotype) of *C. vestitus* at the **Smithsonian National Museum of Natural History** (US Catalog No.: 17101) is not what I have come to learn is *C. vestitus* (Fig. 3, 4). Indeed, **Howard E. McMinn** in his **Illustrated Manual of California Shrubs** (1939) stated that "the specimen...is a good match for *C. perplexans*" which he did not recognize as occurring in Kern County. Nor have I. Contrary to McMinn, I see the *C. vestitus* type as equivalent to a small-leaved variant of *C. crassifolius*, possibly *C. crassifolius* var. *planus*. The **Consortium of California Herbaria** lists one or two collections of this variety by **H. L. Bauer**, April 1930, from wooded hillside in "the Tehachapis near Keene." As for *C. pauciflorus* in Kern County, I see a huge difference in the size of the stipules between the Mexican and our plants, while I distinguish *C. cuneatus* by the leaf undersurface having prominent reticulate veins, in contrast to white flecks aligned along lateral and mid veins in *C. vestitus*.

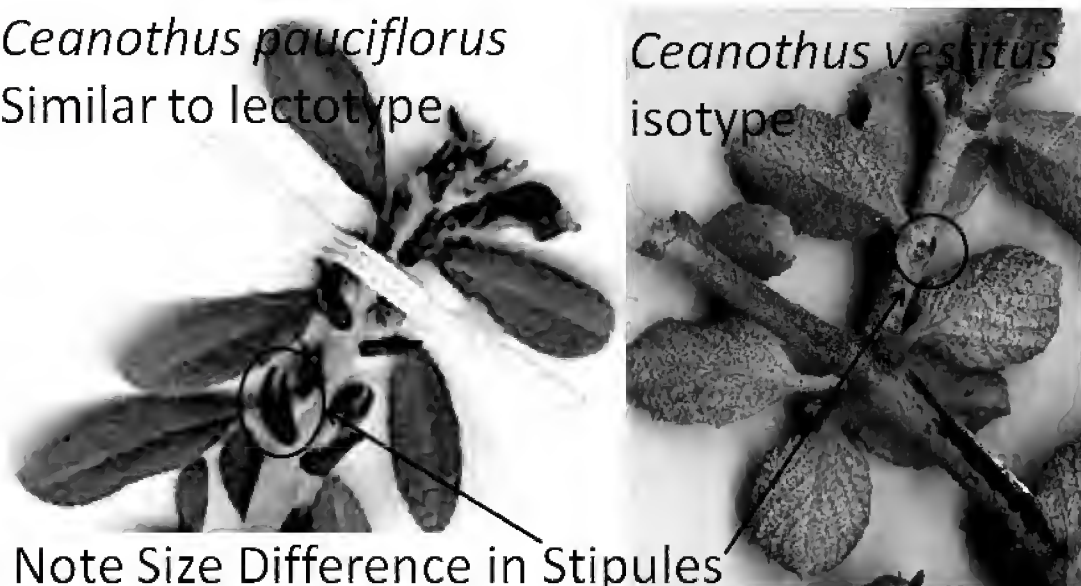
These examples demonstrate that, while my approach does not necessarily adopt the most recent taxonomy, it does take more time to accurately assess species characteristics.

Additionally, I have contacted the editor of the **Botanical Research Institute of Texas**, who has expressed interest in publishing the **Trees and Shrubs of Kern County, California**.

Acknowledgments: The following institutions' online databases were consulted: Calflora Consortium of California Herbaria, Consortium of Pacific Northwest Herbaria, Harvard University Herbaria, New York Botanical Gardens, Kew Royal Botanic Gardens (K), Smithsonian Institution, National Museum of Natural History (US), the Museum of Natural History, (London), the Missouri Botanical Gardens (Tropicos), Southwest Environmental Information Network (SEINet) ♣

Ceanothus pauciflorus
Similar to lectotype

Ceanothus vestitus
isotype



Note Size Difference in Stipules

Fig. 3 - Comparison of stipules from specimens of two species of *Ceanothus*; *C. pauciflorus* from the suspected type locality, collected by D. O. Burge near Guanajuato, Mexico (Syst. Bot. 38:413, image 2013) and *C. vestitus* isotype, collected by E. Green 25 June 1989, deposited in the US National Herbarium, barcode 00094469.

wondered about this, so I looked for the original (type) specimen used by Hooker and found what I presume to be the one specimen used by him (holotype), in

the **Kew Herbarium** (K000729281 with *T. Coulter 110*). It matches Hooker's description, notably the flowers being in bud and a rusty ("ferrugineous") color that were questioned by Torrey and Gray (1838) and by Fross and Wilken (2006). But in my view, it is the *Ceanothus cuneatus* originally described under the name *Rhamnus cuneata*; the citation, therefore, should be *Ceanothus cuneatus* (Hooker) Nuttall — a minor technicality to those concerned more about identifying characteristics of the species — which leads me to the next problem: *How to distinguish C. cuneatus from other similar species*



Fig. 4 - Comparison of leaves and fruit of *Ceanothus cuneatus* on Breckenridge Mt. and *C. vestitus* along the Pacific Crest Trail northeast of Tehachapi.

Gardening with Natives: Ramblings

by Monica Tudor

BELIEVE IT OR NOT, BUT WE ARE HEADING towards fall. There's a tantalizing coolness to the early-morning hours, reminding me that the seasons are finally preparing to change. Thank heavens!

It has been a rough year all over. I ride my horse on the Panorama Vista Preserve and see the effects of the drought everywhere. The river has gone dry and the grass is a golden brown, normal for summer in Bakersfield. What I noticed last weekend were totally



Salvia apiana, white sage

leafless cottonwoods. These were not youngsters, but established trees at least as tall as a telephone pole. Apparently their roots no longer reach the water table.

However, all is not doom and gloom.

The areas of the preserve with drip irrigation are doing very well and remind us what a life-giving resource water is. Recently, a drip system was installed to support the re-vegetation of the river in an area between the canal and the river. A few medium-sized sycamores are growing at that spot. Apparently they dropped lots of seeds in the area, because now that there is a drip system, all kinds of volunteer sycamores are springing up. It's pretty cool to see the juvenile trees sprouting because of the "extra" moisture from the drip – especially since it is intended for another plant. Just shows what a little bit of water can grow.

My California garden has its bright spots and casualties. There are three valley oaks in the garden. The oldest is about 6 inches in diameter and has been in the garden for a few years. It is doing an amazing job with very little water. I realized about the middle of July that it had not been included when the rest of the garden was watered. Nevertheless, it is thriving! The two other valley oak trees were planted last winter. They came from 15-gallon nursery pots and are doing okay. The roots are shaded by plants and bark, helping to cool the soil underneath.

Some of my salvias have died back but others have rooted where they touched the ground. The desert agave has gone underground and sent up new plants as well. I found a new deer grass plant, too. I found a Catalina zaushneria near the parent plant, but it had gotten too dry. Hopefully it is summer-dormant and not really dead!



Island California fuchsia — *Epilobium* (*Zauschneria*) *californicum* 'Catalina'

Photos: Monica Tudor

You might remember that the garden was originally a horse corral. (The horse is now at another barn near the Panorama Preserve.) We had a welder cut the oilfield-pipe fencing and re-weld it to form the gates and supports for the walls. This summer my husband and I finished the job of converting the pole barn to a garden shed. It is so nice to have all the tools and equipment in one place and not in the garage.

I like fall because it is prime planting time! This year I'll be sowing more seeds than in the past. I found some datura seeds and will try to grow two or three plants. My favorite, desert marigold, is always easy to grow from seed. Last year I had elegant clarkia everywhere from a seed mix sold by **Theodore Payne Nursery**. It might re-seed itself. And of course, the fall plant sale is the place to get all kinds of California native plants. See you there! ☀



Kern Chapter CNPS
FALL PLANT SALE

October 24, 2015

9am—1pm

CSUB-FACT

off Camino Media

*Chapter Meetings***upcoming TOPICS****Thursday, September 17, 2015 - 7 pm:**

Naomi Fraga, research scientist at the Rancho Santa Ana Botanic Garden: *Flora of Owens Peak*

Thursday, October 15, 2015 - 7 pm:

César Garcia Valderama, CNPS Baja California Chapter member: *Plants of Baja California*

Thursday, November 19, 2015 - 7 pm:

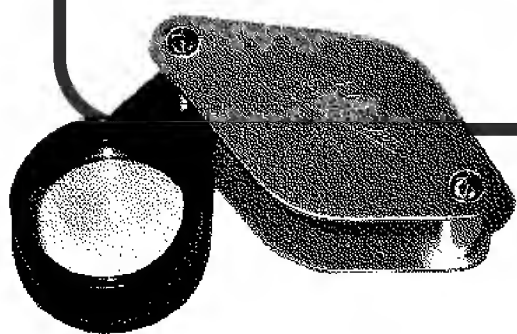
J. Travis Columbus, research scientist at Rancho Santa Ana Botanic Garden and professor of botany at Claremont Graduate University: *California Native Grasses*

All chapter meetings are held the 3rd Thursday of each month at the Hall Ambulance Community Room 1031 21st Street (21st & N St.), Bakersfield, CA.

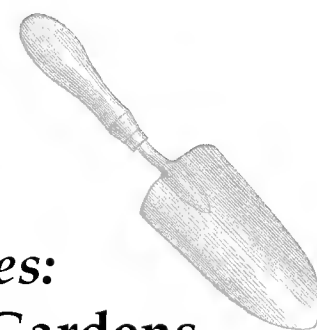
Meeting times:

6 pm — Discussion groups on plant identification and native plant gardening

7 pm — Program presentation



CNPS is the leader for providing reliable information on California native plants and plant conservation. Comprehensive information about California's flora and vegetation communities is available throughout the state for conservation and educational purposes. CNPS's leadership influences personal ethics and actions, as well as public policy for native plant protection.



Gardening with Natives:
**Helping our Foothill Gardens
 Survive the Drought**

Saturday, September 12, 2015**9:00 AM to 3:30 PM**

Mother Lode Fairgrounds

Creskide Building, Stockton St., Sonora, CA

Price: \$30.00/per person

The **Sierra Foothills Chapter** of the **California Native Plant Society** (www.sierrafoothillscnps.org) is sponsoring this "Gardening with Natives" workshop.

Advance registration is required.

Please contact **Jennie Haas** at jhaas953@gmail.com

or by telephone at (209) 962-44759

or send an email to sierrafoothillscnps@gmail.com.



Tall fringed bluebells (*Mertensia ciliata*) blooming in profusion on Sherman Pass Road.



HORSE MEADOW HAIKU

Meadow mimulus
yellow-petaled monkey face
Seep spring next to creek

Scarlet penstemon
Nature's hummingbird feeder
Red rostriflorus

Small lodgepole pine cones
Everywhere beneath the trees
Pitch tent carefully

Ponderosa pine
Puzzle bark and prickly cone
Lower than Jeffrey

Bartola's Country
Greenleaf manzanita and
Dry gray sagebrush

Distant Jupiter
Appears as close as Venus,
Our next-door neighbor

Hypothermia
Penetrates my inner core
Shivering inside

Milky-white moonlight
Reflects the warm healing sun
Calming reminder

Taylor Creek picnic
After making the wrong turn
Maybe it was right

— Suzanne Weller



A generous display of Bridge's penstemon (*Penstemon rostriflorus*) graces Cherry Hill Road on the way to Horse Meadow.



Colorful mountain pride (*Penstemon newberryi*) blooms near Sherman Pass Road.

Photos: Dina Campbell, June 2015

HORSE MEADOW CAMP-OUT - JUNE 26-28, 2015

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The Kern Chapter of the California Native Plant Society meets the third Thursday of each month at Hall Ambulance Community Room, 1013 21st St. (21st & N St), Bakersfield, CA. Chapter website: kern.cnps.org

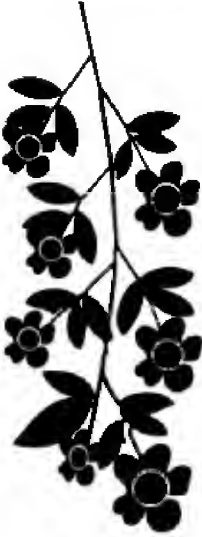
The California Native Plant Society is a non-profit organization dedicated to the conservation of California native plants and their natural habitats, and to increasing the understanding, appreciation, and horticultural use of native plants. CNPS has 31 chapters throughout the state and membership is open to all persons — professional and amateur with an interest in California’s native plants. Members have diverse interests including natural history, botany, ecology, conservation, photography, drawing, hiking and gardening. As a Kern County resident, your membership includes Fremontia, a quarterly journal with articles on all aspects of native plants; the Bulletin, a statewide report of activities and schedules; and The Mimulus Memo, the newsletter of the Kern Chapter.

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Inside this Issue:



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MEETING PLACE, DATES & TOPICS
HORSE MEADOW CAMP-OUT PHOTOS